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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,801	07/31/2006	Marie-Claire Grosjean-Cournoyer	P/4976-36	5300

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EXAMINER	
PAK, JOHN D	

ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,801	GROSJEAN-COURNOYER ET AL.	
	Examiner	Art Unit	
	JOHN PAK	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 19-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 19-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Claims 1-10 and 19-24 are pending in this application.

Elected Subject Matter

Applicant's election with traverse of the invention of Group I, wherein Compound I is the representative species of component (a) and tebuconzaole is the representative species of component (b) in the reply filed on 1/22/2010 is noted here again for the record.

Foreign Priority

This application is a U.S. national stage application of an international application (filed on February 10, 2005), which claims benefit of foreign priority. A certified copy of the foreign priority application is of record. The foreign priority application, EP 04356014.3, was filed on February 12, 2004. Because WO 2004/016088 (cited in the Office action of April 28, 2010) was published on February 26, 2004, it is not prior art under 35 USC 102(a). Applicant's disqualification of WO 2004/016088 under 35 USC 103(c), filed in the response of July 8, 2010, was deemed proper in the previous Office action of November 1, 2010.

Terminal Disclaimer

Applicant is advised that terminal disclaimers are reviewed by the Patent Legal Research Center. According to this office of the USPTO, the terminal disclaimer filed by applicant on January 10, 2011 could not be approved. The stated reason by the Patent Legal Research Center is that the terminal disclaimer did not correctly define the term of the patent (see below) – it should read 35 USC 154 and 173. Please use the language found in the example terminal disclaimers at the end of MPEP 1490.

full statutory term, defined in 35 U.S.C. §§ 154, 156, and 173 as shortened by any terminal disclaimer filed prior to the grant, of said U.S. Patent Nos. 7,776,892 and 7,786,148. The owner agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and said U.S. Patent Nos. 7,776,892 and 7,786,148 are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors, or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory terms, as defined in 35 U.S.C. §§ 145 to 156 and 173, of said U.S. Patent Nos.

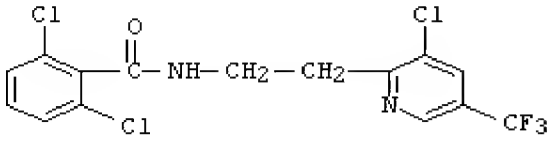
Prior Art Based Ground of Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of WO 01/11965 and Holmwood et al. (US 4,723,984) in view of Hopkinson (US 6,746,988).

WO 01/11965 broadly discloses applicant's compounds of formula (I) as fungicides. See Example 5 in paragraph 0096 in view of paragraphs 0002 to 0031. The structure of Example 5 compound is drawn below by the undersigned Examiner.



It is noted that this compound is readable on applicant's independent claim 1, formula (I). Alternative substitution on the phenyl ring moiety is disclosed as including halogen and haloalkyl (C_{1-6}). See paragraphs 0026 and 0028. Fungicidal activity against fungal diseases of plants such as mildews, cereal powdery mildew, *Erysiphe graminis* and many others are disclosed (paragraph 0037). Combination with other fungicides, insecticides and pesticides is disclosed (paragraph 0041). Concentration of 0.0001 to 1 wt% for direct application and 5 to 95 wt% concentrate strength composition are disclosed (paragraph 0052). 5-1000 g per hectare application rate is disclosed (paragraph 0053). Combination with diluent, carrier, and various additives such as surface active agent dispersing agent, emulsifying agent is disclosed (paragraphs 0042-0051). See treatment is disclosed (paragraph 0053). Soil application and foliar application are disclosed (paragraphs 0053-0054).

Holmwood et al. disclose tebuconazole as a fungicide for protecting plants (claims 1, 3, 7, 9, 13, 15; column 38, lines 48-68). Concentration strength of 0.1 to 95 wt% is disclosed (column 40, lines 1-3). 0.01-50 kg/hectare of soil surface and 0.001-50 g/kg seed application rates are disclosed (column 40, lines 22-26). Protective action and systemic action are disclosed, as are applications to plant parts, the soil, root and seeds (column 39, first paragraph; column 40, lines 46-68). Combination with other

known active compounds such as fungicides is disclosed (column 40, lines 4-8). Use with various carriers, surfactants and other conventional additives is disclosed (column 39, lines 8-68).

The patent by Hopkinson et al. is cited to establish that applicant's compound (b) and (c) fungicides are well-known fungicides, which are known to be used in combination. See claim 16, which discloses for example tebuconazole, trifloxystrobin, thiabendazole, propineb, difenoconazole, diniconazole, epoxiconazole, fenbuconazole, hexaconazole, imbenconazole, ipconazole, and many other well-known fungicides, and mixtures thereof.

The difference between the claimed invention and the cited references is that the references do not expressly disclose the specific combination of compound I + a triazole-structured compound such as tebuconazole. However, both compounds have been taught by the prior art as agriculturally useful fungicides, and combination with other fungicides has been specifically suggested. Therefore, one having ordinary skill in the art would have been motivated to combine the fungicidal compound of formula I such as compound I with a well-known triazole-structured fungicide such as tebuconazole with the expectation of obtaining an advantageous fungicidal mixture, as claimed. In re Kerkhoven, 205 USPQ 1069, 1072 (CCPA 1980); In re Crockett, 126 USPQ 186 (CCPA); Ex parte The NutraSweet Co., 19 USPQ2d 1586, 1587 (Bd. Pat. App. & Int. 1991). Further addition of a third known fungicide would have been similarly suggested from the motivation to obtain additional activity and spectrum of control.

Regarding ratio of 0.01 to 20 (a to b), such ratio would have been obvious from the prior art concentration and application amounts, which when combined at their known amounts and rates would provide such ratio of components.

Applicant's specification data has been reviewed, but the data there is not commensurate in scope with that of the claims. Evidence of nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. In re Kulling, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Lindner, 173 USPQ 356, 358 (CCPA 1972).

Applicant discloses observed data and synergism calculations based on the Colby formula. However, this formula is a rudimentary simplification of expected antimicrobial activity. The formula assumes that antimicrobial activity is linear and the second ingredient only acts on the surviving population that was not controlled by the first ingredient, further assuming that the surviving population is totally unaffected, not even slightly weakened, by the first ingredient. The formula can be rewritten as follows: $E = x + y\ (1 - x/100)$. Note that the underlying assumption in Colby is that y acts only on the surviving population that was totally unaffected by the first ingredient, i.e. $(1 - x/100)$. But such assumptions are rarely validated by actual observations.

For example, Colby can't even reliably predict what would happen when a single compound is used, due to its faulty and too-simple assumptions. Suppose there is a blind test of two 15 g/ha doses of unidentified fungicides, A and B. A provides 25% efficacy, B provides 25% efficacy, but A + B provides about 60-65% efficacy. Using Colby, the blind experiment could lead the person of ordinary skill in the art to conclude

that A + B is synergistic because E = 25 + 25 — (25x25/100) = 43.75. However, when it's revealed that A and B are both the same, compound I (see applicant's data on specification page 13), the ordinary skilled artisan would immediately recognize that Colby underestimates the expected efficacy such that it would even lead to the anomalous conclusion that a fungicidal compound synergizes itself.

Therefore, applicant's specification data and conclusion of synergism based on the Colby formula cannot be found persuasive. In the data for compound I + tebuconazole on page 13, the Examiner would note that result for 15 g/ha compound I + 15 g/ha tebuconazole is clearly synergistic and unexpected, but result for 31 g/ha + 31 g/ha would have been expected because it is no more than additive of the efficacies of compound I and tebuconazole. To date, applicant has presented no claim that is limited to 15 g/ha compound I and 15 g/ha tebuconazole. Note also that the data is tied to the 15 g/ha feature, which means that this is a method invention step, which is relevant only to a method invention. A composition claim cannot properly recite a 15 g/ha feature because the g/ha feature is a method invention feature and not a composition invention feature, i.e. a claimed composition invention of A + B cannot be affected or further limited by how much one intends to apply to the field. The only exception would be in claiming the composition as a unit dosage, e.g. a composition comprising 15 g of compound I + 15 g of compound B.

For these reasons, applicant's data is found insufficient and not commensurate in scope with that of the claimed subject matter. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time

the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Applicant's arguments of January 10, 2011 have been given due consideration but they were deemed unpersuasive. Applicant argues that the claimed invention is directed to a combination of known fungicides "in a particular ratio that clearly exhibits synergism and is neither disclosed nor suggested by the cited art." Applicant continues to cite other unrelated patents that disclose the Colby method for calculating synergism as if they are the controlling authority for accepting its validity. Applicant fails to mention a higher authority, a decision by the Board of Patent Appeals and Interferences, Ex parte Quadranti, 25 USPQ2d 1071, 1072-73 (Bd. Pat. App. & Int. 1992), which expressly rejected the argument that the Colby method is a valid method for calculating patentable synergism. As noted by the Honorable Board, the Colby method always expects *less* than additive result, which produces clear anomalies (as shown above in this Office action) when actual data is carefully reviewed. Id. at 1072.

Applicant argues that the data for 15 g/ha compound I + 15 g/ha tebuconazole is synergistic, but this was already acknowledged by the Examiner in the previous Office action and again in this Office action. Applicant argues further that the data for 31 g/ha compound I + 31 g/ha tebuconazole is likewise synergistic, but this is where applicant's reliance on the Colby method becomes an issue. As explained earlier, applicant's data is merely additive, and the Colby method provides a lowball estimate of what is "expected," which leads to a false positive synergism determination.

Additionally, it must be noted that the metes and bounds of applicant's formula (I) is quite extensive. The substitution on the pyridyl ring can be from 1 to 4, and the substitution on the phenyl ring can be from 1 to 5 and can be as diverse as a halogen, phenoxy, alkylthio, dialkylamino, acyl, "ester," halosulfonyl, halothioalkyl, alkylsulfonamide, and benzylsulfonyl. As compounds that differ in structure that significantly would be expected to possess different properties, it cannot be expected that all the compounds encompassed by applicant's formula (I) would behave in the same manner as 15 g/ha compound I + 15 g/ha tebuconazole. Indeed, applicant's data for 31 g/ha compound I + 31 g/ha tebuconazole shows that even different application rates affect synergism, so the ordinary skilled artisan would have expected different results with compounds structurally different from compound I of formula (I). In the absence of data for such other compounds of formula (I), applicant's data is clearly not commensurate in scope with that of the claims.

For these reasons, applicant's arguments are found unpersuasive and this ground of rejection must be maintained.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10, 19-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 7,776,892. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims are directed to composition and fungicidal method wherein all of the active ingredients that are claimed here can be selected to be present together. In patented claim 9, triazoles (same as applicant's) are specifically recited in a small list. Therefore, the ordinary skilled artisan would have recognized the claimed invention as an obvious variation of the invention set forth in the cited patent.

Claims 1-10, 19-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 7,786,148. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims are directed to composition and fungicidal method wherein all of the active ingredients that are claimed here can be selected to be present together. In patented claim 9, triazoles (same as applicant's) are specifically

recited in a small list. Therefore, the ordinary skilled artisan would have recognized the claimed invention as an obvious variation of the invention set forth in the cited patent.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620.** The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Pak/
Primary Examiner, Art Unit 1616